

**MULTIMEDIA**



**UNIVERSITY**

**STUDENT IDENTIFICATION NO**

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# **MULTIMEDIA UNIVERSITY**

## **FINAL EXAMINATION**

**TRIMESTER 2, 2016/2017**

### **BDS3014 – DECISION SUPPORT SYSTEMS FOR KNOWLEDGE MANAGEMENT**

**(All Sections / Groups)**

**06 MARCH 2017  
2.30 p.m – 4.30 p.m  
(2 Hours)**

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#### **INSTRUCTIONS TO STUDENT**

1. This Question paper consists of 5 pages with 2 parts only.
2. Attempt **ALL** questions in **Part A** and **Part B**. The distribution of the marks for each question is given.
3. Please write all your answers in the Answer Booklet provided.

## **PART A: CASE STUDY QUESTION**

**Read the following case study and answer ALL questions below it. The distribution of marks for each question is given.**

**Case Study: The Siemens ICN Knowledge Management Challenge: ICN/ICM ShareNet.**

Siemens' Information and Communication Networks (ICN) Division is a global provider of telecommunication solutions, active in more than 100 countries. The company's traditional business used to be quite simple and straightforward: it dominated its home market by means of a close relationship with a regulated national telecom monopoly. Siemens used this position to sell integrated products to other national telecoms around the world.

### **ICN/ICM ShareNet – leveraging local innovations globally**

ICN/ICM ShareNet is a community of around 18,000 sales, marketing, business development and research and developments people of Siemens ICN and ICM, active in more than 80 countries on all continents. ShareNet networks these experts globally and lets them share and develop their knowledge in order to create better customer solutions. The goal is to detect local innovations and leverage them on a global scale. ShareNet covers both explicit and tacit knowledge of the sales value creation process including project know-how, technical and functional solution components, and the business environment (for example customer, competitor, market, technology and partner knowledge). ShareNet has a strong focus on experience-based knowledge; you will rarely find official “brochureware” but rather personal statements, comments, field experience of sales projects or the real-life tested pro and cons of a solution. In addition to structured questionnaires on the above mentioned topics, ShareNet provides less structured spaces such as chat rooms, community news, discussion groups on special issues and so called “urgent requests” (UR). Urgent Requests is basically a forum for asking any kind of urgent questions that don't have defined organizational owner. As ShareNet works independent of time zones and organizational boundaries, members usually get answers within a few hours.

### **Contributing knowledge – a task for all members**

The fundamental paradigm of the ShareNet network is that any reader/user is also a publisher. There is no central or single “source of wisdom”. The idea of ShareNet is to gather the collective knowledge of the worldwide community with as little bureaucracy and “barriers to entry” as possible. Most members are active sales and marketing people, not specialist journalists. There are various way in which members can contribute their knowledge. In many countries, filing in the web-based project questionnaires has become

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a mandatory step and a milestone in all important projects. Any contribution is clearly personalized, allowing readers to validate the resource. Related knowledge of any kind can be dynamically linked to, for instance, a sales project description, thus giving a comprehensive picture of the business. This includes other knowledge on ShareNet and any other web-based system with or outside Siemens. Furthermore, every contribution is “commendable” by the whole community, in a similar approach to the book reviews in online bookstores. Collaborating virtually via a website complements traditional ways of co-operation, like telephone conferences and personal meetings, and can be used to provide even richer exchange of knowledge and to build trust and a sense of teamwork among members of (sub-)communities.

### **ShareNet – The virtual organization**

Although ShareNet is integrated in the daily work, that doesn’t mean that no additional support is required. New roles were created to foster the development and implementation: Every local company has at least one “ShareNet Manager”, a multiplier responsible for supporting the members in his organization and ensuring that ShareNet becomes and remains an integral part of their work, by training new users, fostering intra-organizational re-use, promoting the “philosophy” of ShareNet with all stakeholders in his country, and promoting success stories to attract more “power users”. A global editor is the main contact partner for the ShareNet Managers, coaching them for success, triggering the content quality review process and serving as a community manager with regular news and updates.

### **The benefits**

Knowledge sharing does not simply happen, unless there are a number of measurable benefits for both the organization and for the individual. In the case of ShareNet, the main advantages Siemens derives from its knowledge network are firstly, ShareNet provides real life experience knowledge of sales projects and tested customer solution modules ready for application in similar circumstances. It thus saves precious time in all phases of the sales value creation process, in the preparation of an offer, in the negotiation phase and in the implementation of the network. The time previously needed to “re-invent the wheel” is now spent in a richer relationship with the customer and for creating new opportunities. In addition to time, ShareNet saves consulting fees for Siemens, because the knowledge and analyses of external consultants’ reports are made available on a global scale whenever possible. Next, by making innovative customer solutions visible throughout the organization, they are re-used in other countries or with other customers, thus generating new income streams. Finally, by networking the sales frontline in all countries, Siemens is able to detect new trends and developments in both technology and customer requirements earlier for the benefit of the customer.

(Sources: Adapted from: KnowledgeBoard, October 2002)

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- a) From the case study, describe **FIVE (5)** benefits of the Siemens ShareNet knowledge management systems (KMS). (10 marks)
- b) Describe **FIVE (5)** ways how the Internet and Web technologies can further enable the Siemens KMS. You may include other answers that are not mentioned in the case study. (10 marks)
- c) Discuss **FIVE (5)** issues/trends that might affect the implementation of ShareNet at Siemens. Can you think of other relevant issues/trends that are not mentioned in the case? (10 marks)
- d) Explain **FIVE (5)** methods how artificial intelligence can be used in ShareNet KMS. You may include other answers that are not mentioned in the case study. (10 marks)

(Total: 40 marks)

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## PART B: STRUCTURED QUESTIONS

Answer ALL questions. Each question carries 30 marks.

### QUESTION 1

- a) Explain the main components of Business Intelligence Systems (BIS). (8 marks)
- b) Homey is a company that buys houses and rents them to tenants. It has decided to buy some new houses. The management of Homey will decide which houses to buy based on a decision reached by using Herbert Simon's (1977) four-phase decision making model. Outline and discuss **TWO (2)** actions/activities the management might take in each phase when making this decision. (12 marks)
- c) Based on the below Excel worksheet, answer the following questions.

	A	B	C	D	E	F	G	H	I
	Sales Report 2015								
	Salesperson	Week1	Week2	Week3	Week4	Total	Average	Commission	Award
	Sammy	RM7,102.00	RM9,406.00	RM3,468.00	RM9,881.00				
	Ali	RM7,550.00	RM13,115.00	RM6,470.00	RM5,258.00				
	Joe	RM8,216.00	RM10,548.00	RM9,850.00	RM12,802.00				
	Julie	RM6,400.00	RM11,500.00	RM4,470.00	RM6,678.00				
	Geeta	RM5,500.00	RM8,740.00	RM5,560.00	RM2,858.00				
	Commission rate	3%							
	Salesperson's Commission								
	Salesperson:	Joe							
	Award:								

- i) Write a formula to calculate the TOTAL sales for Sammy. (2 marks)
- ii) Write a formula to calculate the AVERAGE sales for Ali. (2 marks)
- iii) Write a formula to calculate the COMMISSION for Geeta. Commission can be calculated by multiplying Total Sales with Commission Rate. You are required to use absolute cell reference where appropriate. (2 marks)
- iv) Create a formula in I6 to display the AWARD for Julie using conditional logic. If Total is more than RM25,000 and Average is larger than RM10,000 then the award would be "Gold" else display "Silver". (2 marks)

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- v) Use the LOOKUP function to display the AWARD value in cell B13 with exact match based on the Salesperson's name entered in cell B12. Write out the formula.

(2 marks)

(Total: 30 marks)

## **QUESTION 2**

- a) Identify **FIVE (5)** application areas of data mining and list **FIVE (5)** common characteristics of these application areas that make them a prospect for data mining studies. (10 marks)
- b) SunSoft is an international IT software co/ mpany that provides a range of educational software and consultation services and it employs approximately 20,000 people worldwide. Because of the large number of employees and their geographical dispersion, it has become necessary to provide a range of collaborative tools from blogs and wikis to instant messaging, chat and video conferencing. Answer the following questions:
- i) Describe **THREE (3)** capabilities of a blog that are not available in email. (6 marks)
- ii) Discuss **THREE (3)** applications of blogs in project collaboration and administration. (6 marks)
- c) Explain **FOUR (4)** benefits and **FOUR (4)** limitations of using virtual worlds for decision support. (8 marks)

(Total: 30 marks)

**End of Paper**